Field Naturalists Club of Ballarat
Incorporated

FEBRUARY 1994

EXCURSION - NEWS SHEET

Meeting	February 4	Sandon Study : P and B Murphy, F Harrap
Meeting	March 4	Annual General Meeting : Members Night
Excursion	February 6	Werribee Sewage Farm : Rohan Bugg
Excursion	March 6	Aireys Inlet/Anglesea

President : Dr. K. McDonnell Ph:
Secretary: Mr. J. Gregurke
Treasurer: Mrs. F. Williamson
Editor: Mr. A. Dyson

Meetings as specified are held at the School of Mines and Industries, Lydiard Street Sth, Art Building, commencing at 7.30 p.m. EXCURSIONS, AS SPECIFIED, COMMENCE FROM BOOK CITY, cnr STURT AND ARMSTRONG STS, BALLARAT at 9.30 a.m. for FULL DAY OUTING OR at 1.30 p.m. for HALF DAY.

Field Reports: December Meeting

Ken Hammond: At Narooma, NSW, five rare Glossy Black Cockatoo, Scarlet Honeyeater and Lewin's Honeyeater. Three species of Lorikeet (Musk, Purple-crowned and Little) are back in the flowering gums around Wendouree. Blackbird with white head and white spots in wing seen in Wendouree.

Greg Binns: A female Satin Flycatcher was collecting insects in walnut tree in Ballarat. At Merrin-Merrin swamp Black-winged stilts are nesting along with cormorants and gulls.

Margaret Tonkin: Cygnets seen piggy backing on parents birds at Lake Wendouree.

Helen Burgess: Displayed a White-tailed Spider caught in sink at Ballarat North.

Committee Meeting - Thursday 24 February at

Tony Dyson's - Durham Lead

ORCHIDS of the BALLARAT DISTRICT.

No 14 of a series

Botanical Name : Orthoceras strictum
(meaning : Gk. - straight horns ,in reference to the erect horn-like lateral sepals.)

Common Name : Horned orchid

Flowering time : Summer

This interesting orchid is quite rare in the Ballarat region where it grows in somewhat moist conditions of open grassy forest. It is recorded for only two localities, with small numbers in each group and with some plants being almost completely yellow.
It is a self pollinating species.

Usually about four grass-like basal leaves surround the flowering stem which is rigid and up to 36cms high. There are one or two stem bracts and these have long sheathing bases. Several greenish to reddish brown flowers, almost sessile, are subtended by pointed floral bracts.The conspicuous dorsal sepal forms a broad hood over the column,the lateral sepals are narrow-linear and erect on either side of the hood and the petals are hidden.The labellum is smooth with a yellow central line and a large cone-shaped yellow callus at the base.

Orthoceras is a genus with only one species in Australia.

Orthoceras strictum

PJM.

Management of Ballarat Water Catchments

Leo Violini

Leo, originally a forester by profession, is the water catchment manager for the Ballarat Water Board (BWB) and the main point of his talk to us was to show how land use in catchment areas affects water quality.

Leo illustrated his talk with colour slides, the first of which showed the global water cycle. In simple terms, this involves the evaporation of water from the sea and transpiration by green plants, the condensation of this water vapour to form clouds which under appropriate conditions allows precipitation of the water as rain or snow which is absorbed by the soil for use by green plants, or runs off via rivers to the sea to recommence the cycle.

The satisfactory quality of our municipal water supply is generally taken for granted but it is determined by the management of the catchment areas. The BWB monitors water quality daily for dissolved solids, turbidity and bacteria. Approximately 70% of Ballarat's water is supplied via the White Swan and associated reservoirs with the other 30% being pumped from the Bungal Dam at Lal Lal. Due to land use problems the water from Bungal Dam is inferior to that from White Swan.

Contamination of water supplies can be divided into point sources such as factory and septic tank effluents producing approximately 20% of the contaminants and diffuse sources such as agriculture producing the other 80%.

Most of the runoff into the BWB reservoirs occurs during two or three major storm events per year. The progress of the water during these events has a direct effect on water quality; phosphates attached to soil particles and leached from the ground being significant offenders.

Leo's slides illustrated many factors -

Road works produce turbid waters which should pass through a silt trap before discharge to natural waterways

Livestock (especially dead ones) add bacteria and nutrients to waterways

Cattle wading into streams cause hoof damage, soil erosion and turbid water

Logging in winter, especially log landings on haul roads, causes mud and thus turbid water. Logging in water catchment areas should not be permitted in winter

The preferred water catchment environment is pine plantations where the needle mat gives excellent water filtration. Water is well cleaned by passage through wetlands inhabited by rushes and sedges. These absorb nutrients, including phosphates, and trap sediments. Leo's aim for BWB catchments is to have surrounding wetlands of approximately 5% of the area of the total water catchments.

Leo ended his talk by referring to the Murray-Darling river system saying that it could take 50 years of best management practice to return the quality of their water to conditions as they were in the 1970's. - AED

To fill in time while we were cruising to our next stop - Scullin Monolith - we could visit the meticulously clean engine room or have a 10 minute helicopter flight. I chose the latter, and although I did not see the effect of this icebreaker through the ice I did see a pod of 3 Killer Whales. These whales predate on penguins and it seems that no palatable marine animal is safe from attack - they even eat their own kind.

These black and white whales have a tall, (up to 1.8m) wide dorsal fin, a conical head with distinctive beak and broad paddle-shaped flippers. The male grows to 9.5m and weigh 8 tons or more. The female is smaller. They have 10-12 conical teeth in each row which curve towards the throat.

Pods can be up to 30 individuals. Calves are born mainly in Autumn and Winter and remain dependent for a year. It is thought that they calve every second year.

Scullin Monolith and nearby Murray Monolith are steep-sided rocky outcrops - very little ice here except for the gentler slopes. Here we were taken by helicopter to the summit. The Monolith is home to thousands of breeding birds - Adelie Penguins on the lower slopes, Antarctic Petrels and fulmers in the rock crevises, mostly inaccessible to humans. This is the largest rookery for the latter two birds. There were Snow Petrels flying, but we did not see their nests here. It was a truly magnificent sight, with thousands of birds flying in all directions.

The Antarctic Fulmer lays a single egg in a crude nest of stones. It is a lovely grey bird with black and white markings. It breeds in Summer and is typical of birds of the Antarctic Seas, they migrate to temperate waters in winter.

The Antarctic Petrel is a conspicuous brown and white bird which breeds in Summer around the Antarctic coast. It rarely flies North of the Antarctica Convergence in Winter. They breed in huge colonies of up to 1 million birds.

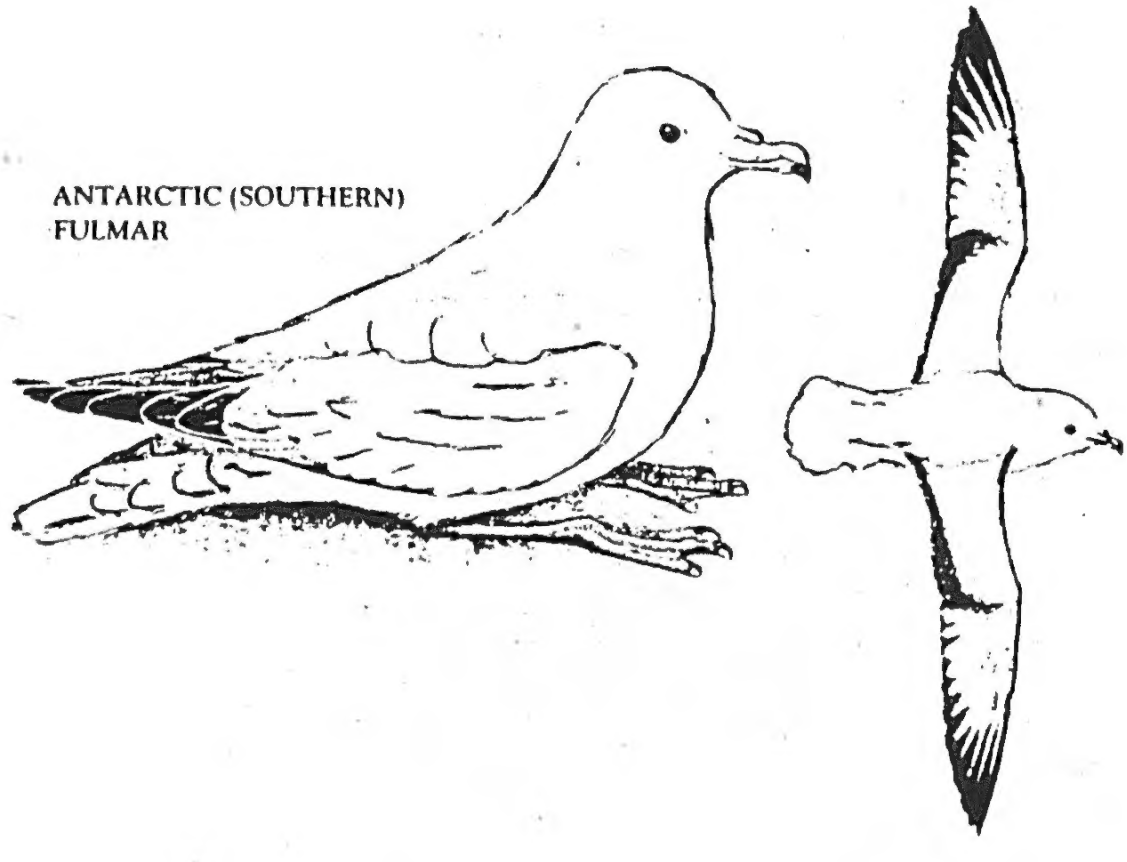
The Snow Petrel is a white bird except for a black bill, eyes and feet. They also breed in Summer and are rarely seen far from floating ice.

Of course the predatory Skuas hovered over the rookeries. We had a marvellous 4 hours on the monolith.

Then it was back to the ship for a short cruise to Murray Monolith. At 10pm we were taken by zodiac over choppy water to see a massive rookery of Adelie Penguins on the gentler slopes while Wilson's Storm Petrels and Snow Petrels were nesting in crevises on the steeper slopes. I found it difficult to negotiate the steep slopes - one needed to be 4-legged!

We had 1½ hours on this Monolith. It was a very memorable day seeing these two monoliths with the myriad of nesting birds as well as those flying and calling.

H.B



Brushtails and Cuscus's
Family phalangeridae.

In Australia the Brushtail possum is the typical member of this family, in New Guinea it is the cuscus, although very different in their behavior they both move rapidly through trees, the fore foot of the brushtail is of simple construction with five fingers rotating from the central palm and they can rotate the first and second finger or toe (as in Koalas and Petaurids).

They have simple low crowned molar teeth that provides an adequate grinding mechanism for their diet of leaves and fruit, this is one of the several characteristics that define the Phalangeridae (Cuscus's will eat birds insects and eggs)

Phalangeroids do not make a nest but use hollows in trees and limbs. Brushtails live in schlerophyl forest and woodland and are very adaptable, they do not extend to New Guinea, however, they were introduced to New Zealand where they have become a pest.

In the Super family Phalangeroidea there is the family Phalangeridae (4) and Burramyidae. Cuscus's live mainly in New Guinea with two in the Australian group all are rainforest dwellers.